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Preservation Briefs: 2

Repointing Mortar Joints in Historic Brick Buildings

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Repointing is the process of removing deteriorated mortar from the joints of a masonry wall and replacing it with new mortar. Properly done, repointing restores the visual and physical integrity of the masonry. Improperly done, repointing not only detracts from the appearance of the building, but may, in fact, cause physical damage to the masonry units themselves.

The purpose of this brief is to provide general guidance on appropriate materials and methods for repointing historic brick buildings and is intended to benefit building owners, architects, and contractors alike. Because of its general nature, this publication should not be considered a specification for repointing. Rather, it should serve as a guide to prepare such specifications; to develop sensitivity to the particular needs of historic masonry; and to assist historic building owners in working cooperatively with contractors and architects.

Identifying the Problem

The decision to repoint is most often related to some obvious sign of deterioration (figure 1) such as disintegrating mortar, cracks in mortar joints, loose bricks, damp walls, or damaged plasterwork. It is, however, erroneous to assume that repointing alone will solve all these problems. Therefore, the true cause of the deterioration should be determined before beginning any repointing work. Leaking roofs or gutters, differential settlement of the building, capillary action causing rising damp, or extreme weather exposure should all be recognized as sources of deterioration and should be dealt with immediately. Without such action, mortar deterioration will continue and any repointing work will have been a waste of time and money.

Budgeting and Scheduling

It is important to recognize that repointing will probably be both expensive and time-consuming due to the extent of handwork and special materials required; however, it should also be emphasized that it is not only possible, but preferable to repoint *only* those areas that require work rather than an entire wall, as is often specified. Recognizing this at the outset may prevent many restoration/rehabilitation jobs from becoming prohibitively expensive.

Figure 1. *All buildings and building materials are in a constant process of deterioration, such as the brick masonry seen here. Through repointing, the deteriorated mortar joints which might otherwise lead to serious damage, can be renewed and thus preserve the historic character and integrity of the brickwork. Photo: Baird M. Smith.*

In scheduling, seasonal aspects need to be considered first. Generally speaking, repointing should only be undertaken when the wall temperatures are between 40° and 95° (F) to prevent freezing or excessive evaporation of the water in the mortar. During hot weather, repointing should ideally be done on the shady side of the building in order to slow the drying process of the mortar.

The relationship of repointing to other proposed work on the building must also be recognized. For example, if paint removal or cleaning are anticipated and if the mortar joints are basically in sound condition and only need selective repointing, it is generally better to postpone repointing until after completion of these activities. However, if the mortar has badly eroded, thus allowing moisture to penetrate deeply into the wall, repointing should be accomplished before cleaning. Related work such as structural or roof repairs should be scheduled so that they do not interfere with repointing and so that all work can take maximum advantage of scaffolding.

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